properties, but differed from it in others. The alcoholic solution gave at first faint and somewhat doubtful traces of urea; on standing several days these became very distinct. After the albuminous matter was separated, ammonia produced a deposition of triple phosphate.

"These results prove beyond a doubt that the fluid was of an urinary nature, and render it probable, that as the liver in the fœtus secretes bile, so the kidneys secrete urine long anterior to birth; and that in a perfect state of the organs the fluid is constantly escaping through the bladder and mixing with the amniotic. This fact has been often suspected, or rather taken for granted, but has never to my knowledge been proved.

"I send a portion of the fluid containing a deposition of lithic acid crystals."

On the 12th February, 1835, Dr. Lee induced premature labour for a deformed pelvis, in a case of six months' pregnancy. Thirty-two ounces of pure liq. amnii flowed through a silver catheter. It was of a straw colour, neither acid nor alkaline. Neither Dr. Bostock nor Dr. Prout could discover any urea or uric acid in it. This renders it probable that, at six months' utero-gestation, a very small quantity, if any, urine is formed by the fœtal kidney.

Mr. Howship has pointed out some curious cases from his treatise on the urinary organs, where urine was found in the bladders of children born before the full term. Sir B. Brodie also communicates a case which seems to decide the point. A male fœtus was brought into the dissecting room, of nearly the full time. The external orifice of the urethra was impervious, and the bladder was found to be moderately distended with urine, as were the infundibula and pelvis of each side. The urine was examined by Mr. Brande, who proved that it contained the usual properties of urine, except uric acid. Other instances are also quoted. The inquiry is curious in a physiological point of view.—*Med. Chirurg. Rev. April,* 1836.

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8. *On a Peculiar Animated Motion observed in the Globules of the Blood.*—Our esteemed cotemporary, the *Edinburgh Medical and Surgical Journal* for April last, contains an account of a curious phenomenon of this description, by Messrs. Emmerson and Reader.—The belief seems now to be pretty generally entertained that the organic particle or globule, both of the blood and of the sap of plants, possess, while it is a component part of the circulating fluid, a vital power or movement inherent in itself, and independent of the influence of the vessels or tubes in which it moves. The truth of this opinion appears sufficiently established by the rapid and peculiar movements observed in the globules of various animals, by such motion being destroyed by electricity, acids, alkalies, or by whatever destroys their vitality, and more especially by attentively observing the slow and circular route of the globules of the *Chara hispida*, in which, as in other plants, the vessels possess but little or no propulsive power, and the circulation consequently is carried on, either by the formation of a partial vacuum, or by a vital action inherent in the globule itself.

The movement described by Messrs. Emmerson and Reader, does not take place until blood has been drawn from a vein for five or six days. It was first observed by Mr. Reader, and when first seen by Mr. Emmerson, he imputed the extraordinary animated motion of the globules to the effects of incipient decomposition in the fluid, or to some change in the organic structure of the globules themselves; but from further observations and inquiries into the probable cause of this action in the particles of the blood, he was convinced that this motion must be the effect of something more than merely a mechanical or chemical impulse.

The following is Mr. Reader's memoranda of the singular phenomenon in question:

"It was on the 6th of September, 1834, that, after a series of observations on the blood, I first observed the globules to have a peculiar motion one among another under the microscope. Doubting the accuracy of my vision, I submitted the blood, which had been drawn from a vein five days before, to repeated examinations under different lenses, without in any degree impugning the previous observation. The serum in which the globules floated was then slightly diluted with distilled water, when I witnessed the most unequivocal living action among the globules, moving about in all directions, sometimes actually appearing to coalesce, if such an expression may be admitted, and then separating; passing over, and on one side of each other, and continually altering their shape, position, and appearance; and as they rolled over, there occasionally seemed to be organs obscurely perceptible under the highest magnifier. These bodies possessed a slightly tinged reddish-yellow centre or nucleus, with an envelope or circumference of a pale whey-like colour. I became so strongly impressed with the extraordinary nature of this new fact in the physiology of the blood, that I continued these observations for four or five months, during which time the facts were witnessed and confirmed by my intelligent and scientific friends. I perfectly assured myself and them, by very numerous, long-continued, and often-repeated experiments and observations, that the motions alluded to were entirely (to use the words of Raspail) independent of any inclination of the object-holder, agitation of the air, shaking of the floor of the apartment, the hands, the breath, the pulsation or the respiration of the observer; or, in short, by any other delusion, either mechanical, chemical, or optical. Hence I concluded that I had fully established, by the most careful observations, the truth of the following phenomena.

"*1st*, That the globules or spherical particles of the blood possess an inherent vital action, with the faculty of voluntary motion among themselves. *2nd*, That, although this peculiar action or voluntary motion is not visible until the interval of a few days after they have been drawn from the body, yet it is not the result of a chemical or fermentative process in the fluid in which they float, but that it is an action *sui generis*, appertaining to themselves alone, since each globule retains its essential characteristic, and in no instance loses its individual identity. Neither can it be the effect of a new order of existences arising from the decomposition of the blood, since in every instance in which decomposition or fermentation had taken place, the globules themselves exhibited not the least voluntary or peculiar motion. *3d*, That acids, salts, and alcohol, if added to the blood, when it was first drawn, entirely prevented and suspended the occurrence of this living action;—the salts, muriate of soda and nitrate of potass, generally reducing the diameter of the globules, either by the solution of their outer coat, or by condensation of their substance, and the diluted acids generally disintegrating their bodies. Sulphur seemed to induce a mass of animalcular motion in the serum of the blood, in addition to the action peculiar to the globules themselves.

"The lenses principally used in these observations were, *1st*, a single plano-convex lens on Wollaston's plan; *2nd*, a doublet plano-convex lens do.; *3d*, a similar lens; *4th*, a compound powder with one of Cary's magnifiers of 100;—magnifying the diameters from 200 to 700 times.

"The latter power, No. 4, exhibited their motions most distinctly, from the field of view being much enlarged. Various other powers and instruments were also employed in the course of these observations; but the principal reliance was placed on the four above-named."

PATHOLOGY.

9. *Clinical Lecture on Affections of the Cervical Spinal Cord, simulating Laryngitis.* By Dr. Corrigan.—M. Delaney, aged 49, a porter, was admitted labouring under excessive dyspnœa, and stridulous respiration. He had cough, with tenacious sputa. His countenance was anxious; his skin cold and clammy; pulse very weak and small, beating 108; abdomen slightly tympanitic. He walked to the hospital, and at first sight the attack seemed to be acute laryngitis. On getting him into bed and examining him accurately, it was found that he had lost sensation from the epigastrium downwards. A week before admission, while carrying a bag of coals, he fell on his face, but felt no bad consequences until the day before he applied here, when he was seized with dyspnœa and stridulous respiration, for which he was bled. He had pain in the neck; and on making even slight pressure on the cervical vertebræ the stridulous breathing was increased to such a degree as to make us dread to repeat the experiment.

Treatment.—He was cupped on the spine to ℥ xij; a blister applied afterwards; calomel and opium given in doses of ten grains of calomel to one grain of opium